

Fact Sheet: Discharging wastewater from construction site dewatering to the King County sewer system



King County

Department of
Natural Resources and Parks
Wastewater Treatment Division
Industrial Waste Program

September 2012

Introduction

Construction dewatering is the act of pumping groundwater or stormwater away from an active construction site. King County regulates the disposal of such wastewater into the King County sewer system. Companies and facilities may pump this water into the sewer if they get discharge approval from both the King County Industrial Waste Program (KCIW) and their local sewer agencies.

King County intends its construction dewatering-acceptance practice to provide the greatest environmental protection while protecting the collection system and treatment plants. King County recognizes that it is not always possible or practical for owners and operators of construction projects to prevent the contamination of stormwater or groundwater or to treat these waste streams before discharging them to surface waters. However, in many areas, the County's sewer capacity is limited, particularly during wet weather months when accepting construction dewatering might cause or add to combined sewer overflows (CSOs). (See Discharges to the sewer during the wet season, page 2.)

Authority to regulate this discharge

- King County Code 28.84.060 provides legal basis for acceptance and permitting of construction dewatering to the King County sewer system.
 - King County Public Rule PUT 8-14 (PR), Discharge of Construction Dewatering to the Sanitary Sewer.
- (See Resources, last page.)



How do I get permission to discharge construction dewatering to the King County sewer system?

For permission to discharge construction dewatering to the King County sewer system, dewatering applicants need to submit KCIW's Construction Dewatering Request Form and required exhibits. (See Resources, last page.) Applicants must take the time to thoroughly review and complete all appropriate sections of the application form and submit all required exhibits. Submitting incomplete applications will delay KCIW's review and issuance of discharge approvals. If you have any questions when completing the dewatering application form, contact KCIW. (See Resources, last page.)

(Continued on page 3)

Discharges to the sewer during the wet season (November through April)

King County's construction dewatering public rule limits discharges during the wet season to 25,000 gallons per day (gpd) or less.

To receive approval to discharge more than 25,000 gpd during this period, the applicant must demonstrate to King County's satisfaction that it cannot obtain a surface water discharge authorization due to site restrictions and/or regulatory restrictions enforced by local, state, and/or federal environmental agencies.

Some sites may apply to discharge to the sanitary sewer for emergency relief only. These include sites that have received coverage under the Washington State Department of Ecology's (Ecology's) Construction Stormwater General Permit or have received site-specific surface water discharge approvals from Ecology or a local jurisdiction may apply to discharge to the sanitary sewer for emergency relief only. In these cases, dewatering applicants should include a copy of the Ecology Construction Stormwater General Permit coverage letter or individual local or state approval document with KCIW's dewatering request form.

Note that a facility's failure to apply for a surface water discharge authorization in a timely way is not an acceptable reason for KCIW to grant a discharge approval to a dewatering site.



How can my facility minimize the volume of flow going to the sanitary sewer?

The primary waste streams encountered at construction sites are contaminated stormwater runoff and groundwater extraction. The applicant can implement the following methods to eliminate, reduce, or delay construction dewatering discharge to the sanitary sewer:

- Develop and implement efficient erosion control BMPs and install treatment systems based on all known, available, and reasonable methods of treatment, prevention, and control (AKART) and discharge construction dewatering to surface waters.
- Minimize surface area draining to sewer.
- Add storage capacity to reduce storms' first flush effects and initial groundwater drawdown volumes.
- Direct point wells dewatering to surface waters (following wells development).
- Reduce size or number of simultaneous open excavations or lengths of open trenches.
- Freeze ground around the excavation.
- Install sheet piling around excavation to reduce groundwater infiltration.
- Install groundwater re-injection (wells) or re-infiltration (trenches).
- Construct slurry walls or secant piles around excavation.
- Consider scheduling work requiring groundwater dewatering to the dry season.

(**HOW DO I GET PERMISSION** *Continued from page 1*)

Depending on a number of factors, including the duration of the discharge, the volume of discharge, wastewater characteristics, complexity of required wastewater treatment, number of discharge points, and other site conditions, KCIW will determine what type of wastewater discharge approval it will issue.

Wastewater discharge approvals range from a Letter of Authorization, which KCIW issues to short duration and/or low volume dischargers requiring the least oversight to an Industrial Wastewater Discharge Permit, which the program typically issues to large volume and/or longer duration dischargers, providing the most oversight.

What will be included in the construction dewatering discharge approval?

King County discharge approvals will include discharge limits for pollutants of concern, special discharge conditions and requirements for self-monitoring, reporting, and contacting local sewer agencies.

Permission from your local sewer agency

As part of the permitting process, KCIW requires that all applicants first contact their local sewer agencies to receive discharge approval. Local sewer agencies reserve the authority to prohibit these discharges or impose site-specific discharge restrictions, discharge location, and special connection conditions.

Receiving discharge approval from local sewer agencies does not guarantee County approval. King County may have additional requirements, often driven by proximity of the discharge to CSOs or the contaminants present at the site.

What discharge limits apply to construction dewatering discharges to the King County sewer?

Dischargers of construction dewatering are required to meet King County's local discharge limits for all contaminants, including, but not limited to heavy metals, settleable solids, oil and grease, and pH. King County local limits and their applicability to



businesses in the sewer service area are cited in King County Code – Title 28. KCIW provides information about local limits, including Web pages and a fact sheet, King County Wastewater Discharge Limits. (See Resources, last page.)

What flow restrictions apply to a construction dewatering discharge?

Flow restrictions are site-specific. KCIW and local sewer agencies will review each dewatering application and will work together to determine the maximum daily discharge volume and maximum discharge rates for each site. All approvals must comply with discharge rate restrictions and conditions listed in the King County Public Rule, Discharge of Construction Dewatering to the Sanitary Sewer. (See Resources, last page.)

What level of wastewater treatment does KCIW require?

The type of treatment system that KCIW requires will depend on the characteristics of the wastewater discharge. The primary pollutants of concern typically originating from construction sites are solids (sediment, dirt, sand, gravel). Discharge of solids materials to the sanitary sewer can cause or contribute to sewer line obstructions and is prohibited. King County has developed the following minimum design standards for sedimentation tanks to be installed at construction sites:

- Minimum Hydraulic Retention Time: ≥ 90 minutes: The working volume of the sedimentation tank must have sufficient volume to allow for a

minimum hydraulic retention time of 90 minutes under peak instantaneous flow conditions.

- Minimum Length-to-Width Ratio (length: width): $\geq 4:1$. The rectangular sedimentation tank needs to be at least four times longer than it is wide
- Maximum Overflow Rate (gallons-per-minute per square foot of surface area): $\leq 1.0 \text{ gpm/ft}^2$: This is calculated by taking the maximum instantaneous flow rate (gpm) and dividing this value by the surface area of the sedimentation tank (length (ft) x width (ft)).

KCIW has provided these standards online with a more detailed technical memorandum, Minimum Standards for Sedimentation Tanks Used at Construction Dewatering Sites. (See Resources, last page.)



KCIW may require additional treatment units when stormwater is discharged from a construction site that is contaminated.

Sites with suspected contaminated soils or groundwater

For potentially contaminated sites, KCIW will require an applicant to demonstrate that the discharge meets King County discharge limits and screening limits developed for specific pollutants of concern. The applicant must propose appropriate levels of treatment and have alternative disposal plans if the discharge does not meet King County limits. The facility may either treat unacceptable batches, if they can demonstrate that an acceptable pretreatment system is on site; or have the water hauled off site to be disposed of by a licensed treatment, storage, disposal, or recycling facility.

What fees apply to contaminated stormwater discharges?

Permit, sewer, and monitoring fees may apply to construction dewatering discharges. KCIW provides information about the specific fees that may apply to a dewatering site's discharge. (See Resources, last page.)

My project is located in a combined sewer area of the City of Seattle. Do I still need a discharge approval from King County?

Yes. In areas where the sewer and stormwater systems are combined and the stormwater already goes to the sanitary sewer (primarily within the City of Seattle), King County still requires the use of best management practices (BMPs) or pretreatment of construction dewatering. In the combined sewer areas, the ability to discharge to storm drainage facilities leading to surface waters is not generally available. Because of this site restriction, the 25,000-gpd discharge limit during the wet season does not apply to these sites. If the discharge is in an area tributary to a King County CSO, the County may put restrictions on discharge during heavy rainstorms. All County CSOs are located in the City of Seattle whose local sewer agency, Seattle Public Utilities, may also restrict discharge volumes in CSO areas.



Resources

Contacting KCIW:

King County Industrial Waste Program
130 Nickerson Street, Ste. 200
Seattle, WA 98109-1658
Ph: 206-263-3000 or TTY: 711
Fax: 206-263-3001
info.kciw@kingcounty.gov

Easy link: www.kingcounty.gov/industrialwaste

Use this easy link and follow the menu on our main Web page to reach all pages below.



Publications available on KCIW's Web pages (or contact our office for alternate formats):

Construction Dewatering:

Web page: www.kingcounty.gov/environment/wastewater/IndustrialWaste/Fees.aspx

Includes:

- KCIW's Construction Dewatering Request Form
- Technical Memorandum: Minimum Standards for Sedimentation Tanks Used at Construction Dewatering Sites

Local Limits:

Web page: www.kingcounty.gov/environment/wastewater/IndustrialWaste/Limits.aspx

Includes:

- Fact sheet: King County Wastewater Discharge Limits

Fees:

Web page: www.kingcounty.gov/environment/wastewater/IndustrialWaste/Fees.aspx

Includes:

- Fact sheet: Understanding charges and fees for sending industrial wastewater to the King County sewer system

Authority:

King County Code 28.84.060: www.kingcounty.gov/council/legislation/kc_code.aspx

King County Public Rule PUT 8-14 (PR), Discharge of Construction Dewatering to the Sanitary Sewer:
www.kingcounty.gov/operations/policies/rules/utilities/put814pr.aspx

Washington State Department of Ecology's Construction Stormwater General Permit:
www.ecy.wa.gov/programs/wq/stormwater/construction

Alternate Formats Available
Voice: 206-263-3000 or TTY Relay: 711

File name: 1209_2850_IW_ConstructionFactSheet.indd skrau